

A NEW SPECIES OF THE RIFFLE BEETLE GENUS *PORTELMIS*
FROM ECUADOR (COLEOPTERA: ELMIDAE)

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Abstract.—*Portelmis gurneyi*, new species, is described, illustrated, and compared to the only previously known member of the genus, *Portelmis nevermanni* (Hinton), from Costa Rica. This new species of water beetle, from Ecuador, represents the first record of the genus from South America.

In his revision of the genus *Stenelmis* of North America, Sanderson (1938) reported that the species described as *Stenelmis nevermanni* Hinton (1936) from Costa Rica was not closely related to the species of *Stenelmis* known from within the United States. Later, Sanderson (1953) described a new monotypic genus, *Portelmis*, with *Stenelmis nevermanni* Hinton as the type-species. No further reports of this genus and species have appeared in the literature other than the catalog citation of *Stenelmis nevermanni* Hinton by Blackwelder (1944) and a brief discussion and three illustrations of the plastron of *Portelmis nevermanni* by Hinton (1976). Therefore, the occurrence of the new species described below is interesting not only because it is new but also because it is the first representative of the genus known from South America. Also, its occurrence in Ecuador suggests that the genus may be more widely dispersed in South America. The new taxon is described below.

Portelmis gurneyi Spangler, NEW SPECIES
Figs. 1-3

Holotype male.—Length 3.0 mm; width 1.5 mm. Body form obovate (Fig. 1). Dorsal surface convex. Color of dorsal and ventral surfaces reddish brown; pronotum, prosternum, mesosternum, metasternum, and discal areas of first 2 abdominal sterna infusate. Dorsal surface of cuticle microreticulate except clypeus smooth on disc. Head behind antennae and between eyes with irregular surface. Labrum as long and as wide as clypeus, feebly emarginate apicomediaally. Mentum glabrous; remainder of ventral side of head hidden by anterior extension of prosternum. Antenna 11-seg-

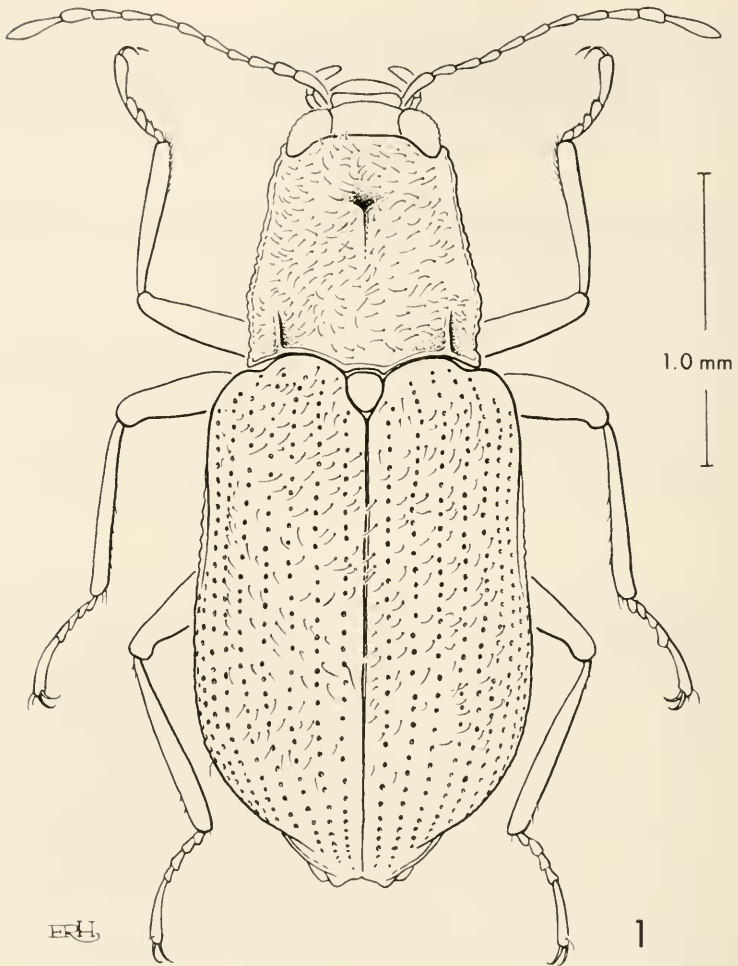


Fig. 1. *Portelmis gurneyi*, habitus view.

mented, long and slender, extending beyond base of pronotum when directed posteriorly. Pronotum elongate, narrowed apically and diverging posteriorly; anterior margin arcuate; lateral margins sinuate and minutely crenulate; posterior margin strongly trisinate; anterolateral angles obtuse; posterolateral angles acute. Surface of pronotum with dense microreticulation and a few scattered yellow setae; finely granulate laterally; midline with a deep fovea preceding a longitudinal groove at apical $\frac{3}{4}$ and 2 shallow sublateral carinae at base; groove deeper anteriorly then becoming shallower posteriorly; each sublateral carina short, about $\frac{1}{6}$ length of pronotum and

each mediad to a posterolateral tumid area. Elytron each with 10 rows of coarse dense punctures, those on disc separated by $\frac{1}{2}$ to $3\times$ their width; without accessory row or stria; intervals flat; humerus strongly tumid; apices moderately broadly produced and conjointly truncate; epipleura with dense tomentum. Scutellum elongate, subovate, arcuate basally, acuminate apically, flat, glabrous, shining. Ventral cuticular surface of prosternum, mesosternum, metasternum, and abdominal sterna 1–5 microreticulate. Prosternum very long in front of procoxae; tomentose; prosternal process long, moderately broad, subparallel sided, apex moderately rounded. Mesosternum narrow, subrectangular, rugose, and moderately depressed medially for reception of prosternal process. Metasternum wide; with shallow, narrow, longitudinal groove on midline; laterally with dense tomentum; discal area shallowly depressed and coarsely, densely punctate, punctures separated by $\frac{1}{2}$ to $3\times$ their width. Metepisternum densely, coarsely punctate. Legs with visible portion of procoxae rounded and trochantin concealed by hypomera. Hypomera tomentose. Front and middle tibiae each with a poorly developed cleaning fringe on inner apical edge; femora and tibiae of all legs covered with tomentum; claws moderately short and stout. Abdominal sterna microreticulate and tomentose; sternum 1 depressed and coarsely, moderately densely punctate on disc, punctures separated by 1 to $2\times$ their width; sterna 2–4 normally convex and practically impunctate; sternum 5 tomentose, impunctate, and posterolateral angles produced into strong, rather broad, toothlike lateral processes which clasp edges of elytra laterad to conjointly truncate apices.

Male genitalia.—As illustrated (Figs. 2, 3).

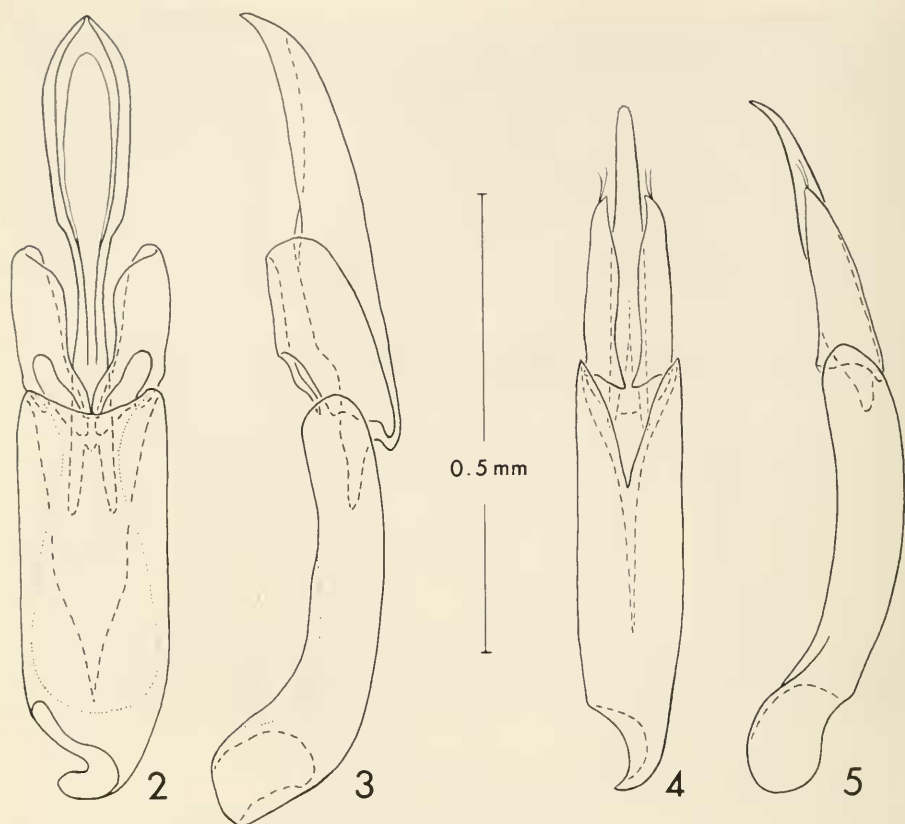
Female.—Similar externally to male.

Type-data.—Holotype, ♂: Ecuador: Napo Province, Lago Agrio (3 km northeast), 17 May 1975, at Pozo #23, Spangler, Gurney, Langley, Cohen. USNM Type No. 76181 in the National Museum of Natural History, Smithsonian Institution. Allotype and 13 paratypes: Ecuador: Pastaza Province, Tzapino, 11°11'S, 77°14'W, 32 km NE Tigueno, 22 May 1976, ele. 400 m. Jeffrey Cohen, 8♂, 5♀.

Variations.—The type-series varies little except as follows: The short sublateral carinae on the base of the pronotum are very indistinct on some specimens, and some specimens have a coating which obscures the normal cuticle. This coating is usually absent from teneral specimens thus giving them a less opaque appearance than the specimens with the coating.

Etymology.—The species name, a patronym, is in honor of Dr. Ashley B. Gurney, eminent orthopterist, my friend, and pleasant and enthusiastic companion on the field trip to Ecuador when the holotype of this new species was collected.

Habitat.—Unknown; all specimens were collected at blacklight. The holotype was collected at a blacklight operated in a jungle clearing at the



Figs. 2-5. Male genitalia. 2-3. *Portelmis gurneyi*, 2, ventral view; 3, lateral view. 4-5. *P. nevermanni*, 4, ventral view; 5, lateral view.

Texaco Oil Company's oil well #23. The specimen may have come from the nearby Rio Aguarico or one of the numerous small streams which drain into the Aguarico. Most likely it originated from one of the small streams because frequent floods periodically leave a layer of mud over much of the substrate in the river which would be detrimental to elmud survival.

Comparative notes.—*Portelmis gurneyi* may be distinguished from *Portelmis nevermanni* by the following combination of characters: (1) Pronotum with weak sublateral carinae, (2) pronotal surface not punctate, (3) first abdominal sternum depressed and coarsely, rather densely punctate on disc, (4) metepisternum densely, coarsely punctate, (5) and the male genitalia (compare Figs. 2-5).

Sanderson's (1953) description of the genus *Portelmis* was based on the single species, *P. nevermanni* which lacks pronotal carinae, therefore, in

his description he used the absence of these carinae as a generic character. Because *P. gurneyi* has sublateral carinae on the base of the pronotum, Sanderson's generic description must be expanded to include taxa with or without these carinae.

Portelmis nevermanni (Hinton)

Figs. 4-5

Stenelmis nevermanni Hinton, 1936: 424; Blackwelder, 1944: 271.

Portelmis nevermanni: Sanderson, 1953: 35.

Diagnosis.—*Portelmis nevermanni* may be recognized by the following combination of characters: (1) Pronotum without sublateral carinae; (2) pronotal surface coarsely, densely granulate; (3) first abdominal sternum not noticeably depressed, granulate, not punctate on disc; (4) metepisternum not punctate, instead, finely granular; (5) and male genitalia distinctive as illustrated (Figs. 4, 5).

Hinton's type-series came from Costa Rica, Reventazon, at light, collected by F. Nevermann. A single paratype in the U.S. National Museum of Natural History bears a second locality label pinned upside down beneath the label cited by Hinton which further states: Hamburg Farm, Reventazon, Ebene Limon. A second specimen of *Portelmis nevermanni* in the NMNH collection is a male as follows: Costa Rica, La Lola, nr. Matina, 11 March 1965, S. S. and W. D. Duckworth. This specimen also was collected at light.

ACKNOWLEDGMENTS

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